UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,610	02/20/2001	Fumihiko Nishio	450106-02405	8152

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NEW YORK, NY 10151	2623	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/700,610	NISHIO ET AL.
	Examiner	Art Unit
	James Sheleheda	2623

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 June 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/06/06

has been entered.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Maissel et al. (Maissel) (WO 99/01984) (of record) in view of Hendricks et al.

(Hendricks) (5,559,549).

As to claim 1, Maissel discloses a transmitting apparatus for providing digital

content (Fig. 8B, headend, 340; page 30, lines 20-27), comprising:

meta information storing means for storing meta information about data that is
transmitted (Fig. 8B, headend, 340 containing EPG program schedule information to be
customized; page 29, lines 3-9 and page 16, lines 24-31);

identifier data associated with a particular portion of the content data that is
adapted to distinguish a segment of content data (program titles identifying program
content; Fig. 9A, page 16, line 24-page 17, line 16 and page 31, lines 7-13);

meta information schema storing means for storing a meta information schema
that defines the data structure of meta information about the content data according to
the content data that is transmitted (default EPG data before customization at a user
site; page 20, lines 19-31, page 21, lines 1-5 and page 30, lines 20-27);

inference rule storing means for storing an inference rule defined by the data
structure of meta information about the content data that is transmitted (inference rules
based upon the user profile to customize EPG data; page 27, lines 28-31, page 28,
lines 1-11 and page 30, lines 20-27); and

transmitting means for transmitting the meta information, the meta information
schema, the inference rule, and the content data through a transmission path when the
inference rule and the meta information schema is not stored in a receiving apparatus
(transmitting the program guide data with the television programming after the user
preference profile has been uploaded out of the receiver to the headend; page 16, lines
12-17 and page 30, lines 20-27);

wherein the meta information schema includes the identifier data (Fig. 9A; page 16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content (actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page 17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data corresponding to each attribute name of the content (program descriptions; page 16, line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data when the inference rule and the meta information schema is stored in the receiving apparatus (transmitting updates to the program guide data with the television programming during the daily or monthly period the preference profile is locally stored before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically disclose *only* transmitting the content data and the meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1; column 5, lines 23-50) wherein only program guide text (metadata information; column 19, lines 14-26) and television programming are transmitted (wherein the television programs are transmitted independently of the program guide; column 6, line 62-column 7, line 43) when program guide data is already stored locally (template data required to construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted (column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the

content data and the meta information, as taught by Hendricks, for the typical benefit of

reducing the system's bandwidth requirements by limiting the amount of information

which needs to be re-transmitted.

As to claim 2, Maissel discloses a transmitting apparatus for providing digital

content (Fig. 8B, headend, 340), comprising:

meta information storing means for storing meta information about content data

that is transmitted (Fig. 8B, headend, 340 containing EPG program schedule

information to be customized; page 29, lines 3-9 and page 16, lines 24-31);

identifier data associated with a particular portion of the content data that is

adapted to distinguish a segment of content data (program titles identifying program

content; Fig. 9A, page 16, line 24-page 17, line 16 and page 31, lines 7-13);

meta information schema storing means for storing a meta information schema

that defines the data structure of meta information about the content data according to

the content data that is transmitted (default EPG data before customization at a user

site; page 20, lines 19-31 and page 21, lines 1-5);

transmitting means for transmitting the meta information, the meta information

schema, and the content data through a transmission path when an inference rule and

the meta information schema are not stored in a receiving apparatus (transmitting the

updated program guide data with the television programming after the user preference

profile has been uploaded out of the receiver to the headend; page 16, lines 12-17 and

page 30, lines 20-27);

communication controlling means for communicating with a receiving apparatus

(page 28, lines 25-30); and

changing means for changing the structure of the meta information schema that

has been stored said meta information schema storing means and the meta information

that has been stored in said meta information storing means corresponding to content

data that has been received through said communication controlling means (preparing

customized EPG data for a particular site based upon a received profile; page 28, lines

17-24 and page 29, lines 1-9);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data

when the inference rule and the meta information schema is stored in the receiving

apparatus (transmitting updates to the program guide data with the television

programming during the daily or monthly period the preference profile is locally stored

before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically

disclose *only* transmitting the content data and the meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are transmitted (wherein the television

programs are transmitted independently of the program guide; column 6, line 62-column

7, line 43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the

content data and the meta information, as taught by Hendricks, for the typical benefit of

reducing the system's bandwidth requirements by limiting the amount of information

which needs to be re-transmitted.

As to claim 3, Maissel discloses a transmitting apparatus for providing digital

content (Fig. 8B, headend, 340; page 30, lines 20-27), comprising:

meta information storing means for storing meta information about content data

that is transmitted (Fig. 8B, headend, 340 containing EPG program schedule

information to be customized; page 29, lines 3-9 and page 16, lines 24-31);

identifier data associated with a particular portion of the content data that is

adapted to distinguish a segment of content data (program titles identifying program

content; Fig. 9A, page 16, line 24-page 17, line 16 and page 31, lines 7-13);

meta information schema storing means for storing a meta information schema

that defines the data structure of meta information about the content data according to

the content that is transmitted (default EPG data before customization at a user site;

page 20, lines 19-31, page 21, lines 1-5 and page 30, lines 20-27);

inference rule storing means for storing an inference rule defined by the data

structure of meta information about data that is transmitted (inference rules based upon

the user profile to customize EPG data; page 27, lines 28-31, page 28, lines 1-11 and

page 30, lines 20-27); and

transmitting means for transmitting the meta information, the meta information

schema, the inference rule, and the content data through a transmission path when the

inference rule is not stored in a receiving apparatus (transmitting the program guide

data with the television programming after the user preference profile has been

uploaded out of the receiver to the headend; page 16, lines 12-17 and page 30, lines

20-27);

communication controlling means for communicating with a receiving apparatus

(page 28, lines 25-30); and

changing means for changing the inference rule (user profile containing inference

rules; page 27, lines 28-31 and page 28, lines 1-9) that has been stored in said

inference rule storing means (wherein the profile, and the contained rules, are updated

with viewing information; page 28, lines 25-31 and page 29, lines 1-9) corresponding to

content data that has been received through said communication controlling means

(television viewing information received through an upstream modem; page 28, lines

25-31);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data

when the inference rule is stored in the receiving apparatus (transmitting updates to the

program guide data with the television programming during the daily or monthly period

the preference profile is locally stored before upload; page 16, lines 12-17 and page 30,

lines 20-27), he fails to specifically disclose *only* transmitting the content data and the

meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are transmitted (wherein the television

programs are transmitted independently of the program guide; column 6, line 62-column

7, line 43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the

content data and the meta information, as taught by Hendricks, for the typical benefit of

reducing the system's bandwidth requirements by limiting the amount of information

which needs to be re-transmitted.

As to claim 4, Maissel and Hendricks disclose converting means for converting

the format of the meta information into a transmission format (wherein the guide

information must be formatted for transmission over the television broadcast channels;

see Maissel at page 16, lines 12-17).

As to claims 5 and 23, Maissel and Hendricks disclose wherein content data that

has been received through said communication controlling apparatus is data that

represents a use history of meta information of the receiving apparatus (a user's

television viewing history; see Maissel at page 28, lines 25-30).

As to claim 6, Maissel discloses a receiving apparatus for receiving data for

providing digital content, comprising:

receiving means (Fig. 2; receiving unit, 120) for receiving at least meta

information and content data through a transmission path when an inference rule is not

stored in the receiving apparatus (transmitting the program guide data with the

television programming after the user preference profile has been uploaded out of the

receiver to the headend; page 16, lines 12-17 and page 30, lines 20-27);

wherein the receiving means receives identifier data associated with a particular

portion of the content data that is adapted to distinguish a segment of content data

(program titles identifying program content; Fig. 9A, page 16, line 24-page 17, line 16

and page 31, lines 7-13);

meta information schema storing means for storing a meta information schema

(customization instructions for EPG layout; page 20, line 19 – page 22, line 17);

profile operating means (Fig. 2; Intelligent agent, 130) for operating selection

criterion for selecting meta information corresponding to the meta information schema

(performing the EPG customization; page 20, lines 19-31 and page 22, line 17);

user profile storing means (Fig. 2; profile storage unit, 140) for storing a user

profile generated by said profile operating means (page 18, lines 18-27);

meta information filtering means (130) for selecting and receiving meta

information corresponding to the user profile (performing the EPG customization based

upon a user preference profile; page 20, lines 19-31 and page 22, lines 1-17);

meta information storing means for storing meta information that has been

selected and received (wherein the customized EPG must be stored before output;

page 24, lines 12-18);

meta information operating means for searching and/or browsing meta

information (page 31, lines 11-13);

inference rule storing means (Fig. 2; profile storage unit, 140) for storing the

inference rule defined by the data structure of meta information (inference rules based

upon the user profile to customize EPG data; page 27, lines 28-31 and page 28, lines 1-

11);

data storing means for receiving and storing data of contents represented by the

meta information that has been selected (recording programs corresponding to EPG

selections; page 8, lines 10-12 and page 21, lines 21-22); and

a data operating portion for operating data that has been stored in said data

storing means (operating the software controlling the system; page 15, line 29-31 and

page 16, lines 1-3);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses receiving the meta information and the content data

when the inference rule and the meta information schema is stored in the receiving

apparatus (transmitting updates to the program guide data with the television

programming during the daily or monthly period the preference profile is locally stored before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically disclose *only* receiving the content data and the meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1; column 5, lines 23-50) wherein only program guide text (metadata information; column 19, lines 14-26) and television programming are received (wherein the television programs are transmitted independently of the program guide; column 6, line 62-column 7, line 43) when program guide data is already stored locally (template data required to construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted (column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Maissel's system to include *only* receiving the content data and the meta information, as taught by Hendricks, for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted.

As to claim 7, Maissel discloses a receiving apparatus for receiving data for providing digital content data (110), comprising:

receiving means (Fig. 2; receiving unit, 120) for receiving at least meta information and the content data through a transmission path (television programs and

program schedule information; page 17, lines 24-29) and receiving identifier data

associated with a particular portion of the content data that is adapted to distinguish a

segment of content data (program titles identifying program content; Fig. 9A, page 16,

line 24-page 17, line 16 and page 31, lines 7-13) when the inference rule is not stored in

a receiving apparatus (transmitting the program guide data with the television

programming after the user preference profile has been uploaded out of the receiver to

the headend; page 16, lines 12-17 and page 30, lines 20-27);

meta information schema storing means for storing a meta information schema

that defines the data structure of meta information (customization instructions for EPG

layout; page 20, line 19 – page 22, line 17);

profile operating means (Fig. 2; Intelligent agent, 130) for operating selection

criterion for selecting meta information corresponding to the meta information schema

(performing the EPG customization; page 20, lines 19-31 and page 22, line 17);

user profile storing means (Fig. 2; profile storage unit, 140) for storing a user

profile generated by said profile operating means (page 18, lines 18-27);

meta information filtering means (130) for selecting and receiving meta

information corresponding to the user profile (performing the EPG customization based

upon a user preference profile; page 20, lines 19-31 and page 22, lines 1-17);

meta information storing means for storing meta information that has been

selected and received (wherein the customized EPG must be stored before output;

page 24, lines 12-18);

meta information operating means for searching and/or browsing meta

information (page 31, lines 11-13);

inference rule storing means (Fig. 2; profile storage unit, 140) for storing an

inference rule about the data structure of meta information (inference rules based upon

the user profile to customize EPG data; page 27, lines 28-31 and page 28, lines 1-11);

changing means for changing the structure of the meta information schema that

has been stored in said meta information schema storing means and the meta

information that has been stored in said meta information storing means (customizing

the EPG structure based upon **current** user profiles and preferences; page 20, lines 19-

page 22, lines 17) corresponding to the user profile that has been stored in said user

profile storing means (page 19, lines 1-8 and page 20, lines 19-27) and to the inference

rule that has been stored in said inference rule storing means (page 27, lines 28-31 and

page 28, lines 1-11);

data storing means for receiving and storing data of contents represented by the

meta information that has been selected (recording programs corresponding to EPG

selections; page 8, lines 10-12 and page 21, lines 21-22); and

a data operating portion for operating data that has been stored in said data

storing means (operating the software controlling the system; page 15, line 29-31 and

page 16, lines 1-3);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses receiving the meta information, the identifier data and

the content data when the inference rule and the meta information schema is stored in

the receiving apparatus (transmitting updates to the program guide data with the

television programming during the daily or monthly period the preference profile is

locally stored before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to

specifically disclose *only* receiving the content data, the identifier data and the meta

information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are received (wherein the television

programs are transmitted independently of the program guide; column 6, line 62-column

7, line 43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* receiving the content

data, the identifier data and the meta information, as taught by Hendricks, for the typical

benefit of reducing the system's bandwidth requirements by limiting the amount of

information which needs to be re-transmitted.

As to claim 8, Maissel and Hendricks disclose wherein said changing means

changes the meta information schema that has been stored in said meta information

schema storing means and the meta information that has been stored in said meta

information storing means corresponding to a use history of meta information of a user

(a user's viewing history; see Maissel at page 28, lines 25-30).

As to claim 9, Maissel and Hendricks disclose wherein said changing means

changes the meta information schema corresponding to a user's setup (see Maissel at

page 19, lines 9-18) and stores the changed meta information schema and changed

meta information to said meta information schema storing means (user profile indicating

how to modify the EPG; see Maissel at page 19, lines 9-18) and said meta information

storing means (the customized EPG; see Maissel at page 20, lines 19-page 22, lines

17), respectively.

As to claim 10, Maissel discloses a transmitting and receiving apparatus having a

transmitting apparatus for providing digital content (Fig. 8B, headend, 340; page 30,

lines 20-27) and a receiving apparatus for receiving digital content (110),

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data

that is transmitted (Fig. 8B, headend, 340 containing EPG program schedule

information to be customized; page 29, lines 3-9 and page 16, lines 24-31);

meta information schema storing means for storing a meta information schema

that defines the data structure of meta information about content data according to the

content data that is transmitted (default EPG data before customization at a user site;

page 20, lines 19-31, page 21, lines 1-5 and page 30, lines 20-27);

inference rule storing means for storing an inference rule defined by the ata

structure of meta information about content data that is transmitted (inference rules

based upon the user profile to customize EPG data; page 27, lines 28-31, page 28,

lines 1-11 and page 30, lines 20-27); and

transmitting means for transmitting the meta information, the meta information

schema, the inference rule, and content data through a transmission path when the

inference rule and the meta information schema is not stored in a receiving apparatus

(transmitting the program guide data with the television programming after the user

preference profile has been uploaded out of the receiver to the headend; page 16, lines

12-17 and page 30, lines 20-27), and

receiving means (Fig. 2; receiving unit, 120) for receiving the meta information,

the meta information schema, the inference rule, identifier data associated with a

particular portion of the content data that is adapted to distinguish a segment of content

data (program titles identifying program content; Fig. 9A, page 16, line 24-page 17, line

16 and page 31, lines 7-13) and content data through a transmission path (television

programs and program schedule information; page 17, lines 24-29 and page 30, lines

20-27) when the inference rule and meta information schema are not stored in a

receiving apparatus (transmitting the program guide data with the television

programming after the user preference profile has been uploaded out of the receiver to

the headend; page 16, lines 12-17 and page 30, lines 20-27);

meta information schema storing means the received meta information schema

(default EPG schedule data before customization; page 24, lines 27-31 and page 25,

lines 1-3);

profile operating means (Fig. 2; Intelligent agent, 130) for operating a selection

criterion for selecting meta information corresponding to the meta information schema

(performing EPG customization; page 20, lines 19-31 and page 22, line 17);

user profile storing means (Fig. 2; profile storage unit, 140) for storing a user

profile generated by said profile operating means (page 18, lines 18-27);

meta information filtering means (130) for selecting and receiving meta

information corresponding to the user profile (performing the EPG customization based

upon a user preference profile; page 20, lines 19-31 and page 22, lines 1-17);

meta information storing means for storing meta information that has been

selected and received (wherein the customized EPG must be stored before output;

page 24, lines 12-18);

meta information operating means for searching and/or browsing meta

information (page 31, lines 11-13);

inference rule storing means (Fig. 2; profile storage unit, 140) for storing an

inference rule that has been received (inference rule contained within the user profile;

page 27, lines 28-31, page 28, lines 1-11 and page 30, lines 20-27);

data storing means for receiving and storing data of content that is represented

by the selected meta information (recording programs corresponding to EPG selections;

page 8, lines 10-12 and page 21, lines 21-22); and

a data operating portion for operating data that has been stored in said data

storing means (operating the software controlling the system; page 15, line 29-31 and

page 16, lines 1-3);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting and receiving the meta information and the

content data when the inference rule and the meta information schema is stored in the

receiving apparatus (transmitting updates to the program guide data with the television

programming during the daily or monthly period the preference profile is locally stored

before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically

disclose *only* transmitting and receiving the content data and the meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1; column 5, lines 23-50) wherein only program guide text (metadata information; column 19, lines 14-26) and television programming are transmitted and received (wherein the television programs are transmitted independently of the program guide; column 6, line 62-column 7, line 43) when program guide data is already stored locally (template data required to construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted (column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Maissel's system to include *only* transmitting and receiving the content data and the meta information, as taught by Hendricks, for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted.

As to claim 11, Maissel discloses a transmitting and receiving apparatus having a transmitting apparatus for providing digital content (Fig. 8A, headend, 340; page 28, lines 12-24) and a receiving apparatus for receiving digital content (110),

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data that is transmitted (Fig. 8A, headend, 340 containing EPG program schedule information to be customized; page 29, lines 3-9 and page 16, lines 24-31);

meta information schema storing means for storing a meta information schema

that defines the data structure of meta information about content data according to the

content data that is transmitted (the default EPG data before customization for a user

site; page 20, lines 19-31, page 21, lines 1-5 and page 29, lines 1-9);

transmitting means for transmitting the meta information, the meta information

schema, and content data through a transmission path when the inference rule and the

meta information schema are not stored in a receiving apparatus (transmitting the

program guide data with the television programming after the user preference profile

has been uploaded out of the receiver to the headend; page 16, lines 12-17 and page

30, lines 20-27);

communication controlling means for communicating with a receiving apparatus

(page 28, lines 25-30); and

changing means for changing the structure the meta information schema that has

been stored in said meta information storing means and the meta information that has

been stored in said meta information storing means corresponding to content data that

has been received from a receiving apparatus (preparing customized EPG data for a

particular site based upon a received profile; page 28, lines 17-24 and page 29, lines 1-

9), and

where the receiving apparatus comprises:

receiving means (Fig. 2; receiving unit, 120) for receiving the meta information,

the meta information schema, identifier data associated with a particular portion of the

content data that is adapted to distinguish a segment of content data (program titles

identifying program content; Fig. 9A, page 16, line 24-page 17, line 16 and page 31,

lines 7-13) and content data through a transmission path (television programs and

program schedule information; page 17, lines 24-29 and page 30, lines 20-27);

meta information schema storing means for storing meta information schema that

has been received (wherein the customized EPG data and format must be stored upon

receipt; page 24, lines 27-31, page 25, lines 1-3 and page 29, lines 1-9);

profile operating means for operating a selection criterion for selecting meta

information corresponding to the meta information schema (wherein viewer information

is selectively stored and transmitted for later EPG customization; page 17-31);

user profile storing means (page 28, lines 17-31) for storing a user profile

generated by said profile operating means (wherein the profile data must be stored

before transmission to the headend; page 28, lines 17-31);

meta information filtering means for selecting and receiving meta information

corresponding to the user profile (receiving the EPG customized based upon a user

profile; page 20, lines 19-31, page 22, lines 1-17 and page 29, lines 1-9);

meta information storing means for storing meta information that has been

selected and received (wherein the customized EPG must be stored before output;

page 24, lines 12-18);

meta information operating means for searching and/or browsing meta

information (page 31, lines 11-13);

data storing means for receiving and storing data of content that is represented

by the selected meta information (recording programs corresponding to EPG selections;

page 8, lines 10-12 and page 21, lines 21-22); and

a data operating portion for operating data that has been stored in said data

storing means (operating the software controlling the system; page 15, line 29-31 and

page 16, lines 1-3); and

communication controlling means for transmitting data to the transmitting

apparatus (page 28, lines 25-31);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data

when the inference rule and the meta information schema is stored in the receiving

apparatus (transmitting updates to the program guide data with the television

programming during the daily or monthly period the preference profile is locally stored

before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically

disclose *only* transmitting the content data and the meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are transmitted (wherein the television

programs are transmitted independently of the program guide; column 6, line 62-column

7, line 43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the

content data and the meta information, as taught by Hendricks, for the typical benefit of

reducing the system's bandwidth requirements by limiting the amount of information

which needs to be re-transmitted.

As to claim 12, Maissel discloses a transmitting and receiving apparatus having a

transmitting apparatus for providing digital content (Fig. 8B, headend, 340; page 30,

lines 20-27) and a receiving apparatus for receiving digital content (110),

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data

according to the content data that is transmitted (Fig. 8B, headend, 340 containing EPG

program schedule information to be customized; page 29, lines 3-9 and page 16, lines

24-31);

meta information schema storing means for storing a meta information schema

that defines the data structure of meta information about data that is transmitted (default

EPG data before customization at a user site; page 20, lines 19-31, page 21, lines 1-5

and page 30, lines 20-27);

inference rule storing means for storing an inference rule about the data structure

of meta information about content data that is transmitted (inference rules based upon

the user profile to customize EPG data; page 27, lines 28-31, page 28, lines 1-11 and

page 30, lines 20-27); and

transmitting means for transmitting the meta information, the meta information

schema, the inference rule, and content data through a transmission path when the

inference rule and the meta information schema are not stored in a receiving apparatus

(transmitting the program guide data with the television programming after the user

preference profile has been uploaded out of the receiver to the headend; page 16, lines

12-17 and page 30, lines 20-27);

communication controlling means for communicating with a receiving apparatus

(page 28, lines 25-30); and

changing means for changing the inference rule (user profile containing inference

rules; page 27, lines 28-31 and page 28, lines 1-9) that has been stored in said

inference rule storing means (wherein the profile, and the contained rules, are updated

with viewing information; page 28, lines 25-31 and page 29, lines 1-9) corresponding to

content data that has been received through said communication controlling means

(television viewing information received through an upstream modem; page 28, lines

25-31); and

wherein the receiving apparatus comprises:

receiving means (Fig. 2; receiving unit, 120) for receiving the meta information,

the meta information schema, the inference rule, identifier data associated with a

particular portion of the content data that is adapted to distinguish a segment of content

data (program titles identifying program content; Fig. 9A, page 16, line 24-page 17, line

16 and page 31, lines 7-13) and contents data through a transmission path (television

programs and program schedule information; page 17, lines 24-29 and page 30, lines

20-27);

meta information schema storing means for storing the meta information schema

that has been received (default EPG schedule data before customization; page 24, lines

27-31 and page 25, lines 1-3);

profile operating means (Fig. 2; Intelligent agent, 130) for operating a selection

criterion for selecting meta information corresponding to the meta information schema

(performing EPG customization; page 20, lines 19-31 and page 22, lines 1-17);

user profile storing means (Fig. 2; profile storage unit, 140) for storing a user

profile generated by said profile operating means (page 18, lines 18-27);

meta information filtering means (130) for selecting and receiving meta

information corresponding to the user profile (performing the EPG customization based

upon a user preference profile; page 20, lines 19-31 and page 22, line 17);

meta information storing means for storing meta information that has been

selected and received (wherein the customized EPG must be stored before output;

page 24, lines 12-18);

meta information operating means for searching and/or browsing meta

information (page 31, lines 11-13);

inference rule storing means (Fig. 2; profile storage unit, 140) for storing an

inference rule that has been received (inference rule contained within the user profile;

page 27, lines 28-31, page 28, lines 1-11 and page 30, lines 20-27);

data storing means for receiving and storing data of content that is represented

by the selected meta information (recording programs corresponding to EPG selections;

page 8, lines 10-12 and page 21, lines 21-22);

a data operating portion for operating data that has been stored in said data

storing means (operating the software controlling the system; page 15, line 29-31 and

page 16, lines 1-3); and

communication controlling means for transmitting data to the transmitting

apparatus (page 28, lines 25-31);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16, line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data when the inference rule and the meta information schema is stored in the receiving apparatus (transmitting updates to the program guide data with the television programming during the daily or monthly period the preference profile is locally stored before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically disclose *only* transmitting the content data and the meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1; column 5, lines 23-50) wherein only program guide text (metadata information; column 19, lines 14-26) and television programming are transmitted (wherein the television programs are transmitted independently of the program guide; column 6, line 62-column 7, line 43) when program guide data is already stored locally (template data required to construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted (column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Maissel's system to include *only* transmitting the content data and the meta information, as taught by Hendricks, for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted.

As to claim 13, Maissel discloses a transmitting and receiving apparatus having a

transmitting apparatus for providing digital content (Fig. 8B, headend, 340; page 30,

lines 20-27) and a receiving apparatus for receiving digital content (110),

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data

according to the content data that is transmitted (Fig. 8B, headend, 340 containing EPG

program schedule information to be customized; page 29, lines 3-9 and page 16, lines

24-31);

meta information schema storing means for storing a meta information schema

that defines the data structure of meta information about content data that is transmitted

(default EPG data before customization at a user site; page 20, lines 19-31, page 21,

lines 1-5 and page 30, lines 20-27);

inference rule storing means for storing an inference rule about the data structure

of meta information about content data that is transmitted (inference rules based upon

the user profile to customize EPG data; page 27, lines 28-31, page 28, lines 1-11 and

page 30, lines 20-27); and

transmitting means for transmitting the meta information, the meta information

schema, the inference rule, and content data through a transmission path when the

inference rule and the meta information schema are not stored in a receiving apparatus

(transmitting the program guide data with the television programming after the user

preference profile has been uploaded out of the receiver to the headend; page 16, lines

12-17 and page 30, lines 20-27), and

wherein the receiving apparatus comprises:

receiving means (Fig. 2; receiving unit, 120) for receiving the meta information,

the meta information schema, the inference rule, identifier data associated with a

particular portion of the content data that is adapted to distinguish a segment of content

data (program titles identifying program content; Fig. 9A, page 16, line 24-page 17, line

16 and page 31, lines 7-13) and content data through a transmission path (television

programs and program schedule information; page 17, lines 24-29 and page 30, lines

20-27);

meta information schema storing means for storing the meta information schema

that has been received (default EPG schedule data before customization; page 24, lines

27-31 and page 25, lines 1-3);

profile operating means (Fig. 2; Intelligent agent, 130) for operating a selection

criterion for selecting meta information corresponding to the meta information schema

(performing EPG customization; page 20, lines 19-31 and page 22, line 17);

user profile storing means (Fig. 2; profile storage unit, 140) for storing a user

profile generated by said profile operating means (page 18, lines 18-27);

meta information filtering means (130) for selecting and receiving meta

information corresponding to the user profile (performing the EPG customization based

upon a user preference profile; page 20, lines 19-31 and page 22, line 17);

meta information storing means for storing meta information that has been

selected and received (wherein the customized EPG must be stored before output;

page 24, lines 12-18);

meta information operating means for searching and/or browsing meta

information (page 31, lines 11-13);

inference rule storing means (Fig. 2; profile storage unit, 140) for storing an

inference rule that has been received (inference rule contained within the user profile;

page 27, lines 28-31, page 28, lines 1-11 and page 30, lines 20-27);

changing means for changing the structure of the meta information schema that

has been stored in said meta information schema storing means and the meta

information that has been stored in said meta information storing means (customizing

the EPG structure based upon **current** user profiles and preferences; page 20, lines 19-

page 22, lines 17) corresponding to the user profile that has been stored in said user

profile storing means (page 19, lines 1-8 and page 20, lines 19-27) and to the inference

rule that has been stored in said inference rule storing means (page 27, lines 28-31 nad

page 28, lines 1-11);

data storing means for receiving and storing data of contents that is represented

by the selected meta information (recording programs corresponding to EPG selections;

page 8, lines 10-12 and page 21, lines 21-22); and

a data operating portion for operating data that has been stored in said data

storing means (operating the software controlling the system; page 15, line 29-31 and

page 16, lines 1-3);

wherein the meta information schema includes the identifier data (Fig. 9A; page 16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content (actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page 17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data corresponding to each attribute name of the content (program descriptions; page 16, line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data when the inference rule and the meta information schema is stored in the receiving apparatus (transmitting updates to the program guide data with the television programming during the daily or monthly period the preference profile is locally stored before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically disclose *only* transmitting the content data and the meta information.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1; column 5, lines 23-50) wherein only program guide text (metadata information; column 19, lines 14-26) and television programming are transmitted (wherein the television programs are transmitted independently of the program guide; column 6, line 62-column 7, line 43) when program guide data is already stored locally (template data required to construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted (column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the

content data and the meta information, as taught by Hendricks, for the typical benefit of

reducing the system's bandwidth requirements by limiting the amount of information

which needs to be re-transmitted.

As to claim 14, Maissel discloses a transmitting method for providing digital

content, comprising the steps of:

when meta information about content data that is transmitted (transmitting the

program guide data with the television programming; page 16, lines 12-17),

transmitting a meta information schema that defines the data structure of the

meta information (default EPG data before customization at a user site; page 20, lines

19-31, page 21, lines 1-5 and page 30, lines 20-27), identifier data associated with a

particular portion of the content data that is adapted to distinguish a segment of content

data (program titles identifying program content; Fig. 9A, page 16, line 24-page 17, line

16 and page 31, lines 7-13) and content data through a transmission path (transmitting

the program guide data with the television programming; page 16, lines 12-17) when the

inference rule and the meta information schema are not stored in a receiving apparatus

(transmitting the program guide data with the television programming after the user

preference profile has been uploaded out of the receiver to the headend; page 16, lines

12-17 and page 30, lines 20-27), and

changing the structure the meta information schema and the meta information

corresponding to data that has been received from a receiving apparatus (preparing

customized EPG data for a particular site based upon a received profile; page 28, lines

17-24 and page 29, lines 1-9) and transmitting the changed data (page 29, lines 4-13);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting the identifier data and the content data

when the inference rule and the meta information schema is stored in the receiving

apparatus (transmitting updates to the program guide data with the television

programming during the daily or monthly period the preference profile is locally stored

before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically

disclose *only* transmitting the content data and the identifier data.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are transmitted (wherein the television

programs are transmitted independently of the program guide; column 6, line 62-column

7, line 43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the

content data and the identifier data, as taught by Hendricks, for the typical benefit of

reducing the system's bandwidth requirements by limiting the amount of information

which needs to be re-transmitted.

As to claim 15, Maissel discloses a transmitting method for providing digital

content, comprising the steps of:

when meta information about content data that is transmitted (transmitting the

program guide data with the television programming; page 16, lines 12-17),

transmitting a meta information schema that defines the data structure of the

meta information (default EPG data before customization at a user site; page 20, lines

19-31, page 21, lines 1-5 and page 30, lines 20-27), an inference rule about the data

structure of the meta information (inference rule contained within the user profile; page

27, lines 28-31, page 28, lines 1-11 and page 30, lines 20-27)and content data through

a transmission path (transmitting the program guide data with the television

programming; page 16, lines 12-17) including identifier data associated with a particular

portion of the content data that is adapted to distinguish a segment of content data

(program titles identifying program content; Fig. 9A, page 16, line 24-page 17, line 16

and page 31, lines 7-13) when the meta information and inference rule are not stored in

a receiving apparatus (transmitting the program guide data with the television

programming after the user preference profile has been uploaded out of the receiver to

the headend; page 16, lines 12-17 and page 30, lines 20-27),

changing the inference rule corresponding to content data that has been received

from a receiving apparatus (wherein the profile, and the contained rules, are updated

with viewing information; page 28, lines 25-31 and page 29, lines 1-9) and transmitting

the changed data (page 29, lines 4-13);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting the meta information, the identifier data and

the content data when the inference rule and the meta information schema is stored in

the receiving apparatus (transmitting updates to the program guide data with the

television programming during the daily or monthly period the preference profile is

locally stored before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to

specifically disclose *only* transmitting the meta information, content data and the

identifier data.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are transmitted (wherein the television

programs are transmitted independently of the program guide; column 6, line 62-column

7, line 43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the meta

information, content data and the identifier data, as taught by Hendricks, for the typical

benefit of reducing the system's bandwidth requirements by limiting the amount of

information which needs to be re-transmitted.

As to claims 16 and 24, Maissel and Hendricks disclose receiving a meta

information use history from the receiving apparatus (see Maissel at page 28, lines 25-

31) and transmitting a meta information schema, meta information and an inference rule

that have been changed so that they have respective data structures corresponding to

the meta information use history (transmitting the customized EPG; see Maissel at page 29, lines 1-9).

As to claim 17, Maissel discloses a receiving method for receiving data for providing digital content, comprising the steps of:

storing a meta information schema that defines the data structure of meta information (customization instructions for EPG layout; page 20, line 19 – page 22, line 17);

storing identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data (program titles identifying program content; Fig. 9A, page 16, line 24-page 17, line 16 and page 31, lines 7-13);

storing at least meta information that has been selected and received (wherein the customized EPG must be stored before output; page 24, lines 12-18) when the inference rule and meta information schema are not stored in a receiving apparatus (transmitting the program guide data with the television programming after the user preference profile has been uploaded out of the receiver to the headend; page 16, lines 12-17 and page 30, lines 20-27);

searching and/or browsing the meta information (page 31, lines 11-13); and

changing the structure of the meta information schema and meta information that has been stored (customizing the EPG structure based upon **current** user profiles and preferences; page 20, lines 19-page 22, lines 17) corresponding to a user profile (page

19, lines 1-8 and page 20, lines 19-27) and to an inference rule (page 27, lines 28-31

and page 28, lines 1-11);

   wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

   wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

   While Maissel discloses storing the meta information and the content data when

the inference rule and the meta information schema is stored in the receiving apparatus

(transmitting updates to the program guide data with the television programming during

the daily or monthly period the preference profile is locally stored before upload; page

16, lines 12-17 and page 30, lines 20-27), he fails to specifically disclose *only* storing

the meta information and content data.

   In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are stored (wherein the television programs

are transmitted independently of the program guide; column 6, line 62-column 7, line

43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* storing the meta

information and content data, as taught by Hendricks, for the typical benefit of reducing

the system's bandwidth requirements by limiting the amount of information which needs

to be re-transmitted.

As to claim 18, Maissel discloses a transmitting and receiving method for

providing digital content and receiving digital content, comprising the steps of:

transmitting meta information about content data that is transmitted (transmitting

the program guide data with the television programming; page 16, lines 12-17), a meta

information schema that defines the data structure of the meta information (default EPG

data before customization at a user site; page 20, lines 19-31, page 21, lines 1-5 and

page 30, lines 20-27), identifier data associated with a particular portion of the content

data that is adapted to distinguish a segment of content data (program titles identifying

program content; Fig. 9A, page 16, line 24-page 17, line 16 and page 31, lines 7-13)

and content data through a transmission path when the inference rule and meta

information schema are not stored in a receiving apparatus (transmitting the program

guide data with the television programming after the user preference profile has been

uploaded out of the receiver to the headend; page 16, lines 12-17 and page 30, lines

20-27);

changing the structure of the meta information schema that is transmitted

corresponding to content data that has been received from a receiving apparatus

(preparing customized EPG data for a particular site based upon a received profile;

page 28, lines 17-24 and page 29, lines 1-9);

storing a meta information schema that defines the data structure of the meta

information that has been received on a receiving side (wherein the customized EPG

must be stored before output; page 24, lines 12-18);

storing the meta information that has been selected and received (wherein the

customized EPG must be stored before output; page 24, lines 12-18); and

searching and/or browsing the meta information (page 31, lines 11-13);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data

when the inference rule and the meta information schema are stored in the receiving

apparatus (transmitting updates to the program guide data with the television

programming during the daily or monthly period the preference profile is locally stored

before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically disclose *only* transmitting the meta information and content data.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1; column 5, lines 23-50) wherein only program guide text (metadata information; column 19, lines 14-26) and television programming are transmitted (wherein the television programs are transmitted independently of the program guide; column 6, line 62-column 7, line 43) when program guide data is already stored locally (template data required to construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted (column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Maissel's system to include *only* transmitting the meta information and content data, as taught by Hendricks, for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted.

As to claim 19, Maissel discloses a transmitting and receiving method for providing digital content and receiving digital content, comprising the steps of:

transmitting meta information about content data that is transmitted (transmitting the program guide data with the television programming; page 16, lines 12-17), a meta information schema that defines the data structure of the meta information (default EPG

data before customization at a user site; page 20, lines 19-31, page 21, lines 1-5 and

page 30, lines 20-27), an inference rule (page 28, lines 1-9 and page 30, lines 20-27),

identifier data associated with a particular portion of the content data that is adapted to

distinguish a segment of content data (program titles identifying program content; Fig.

9A, page 16, line 24-page 17, line 16 and page 31, lines 7-13) and content data through

a transmission path when the inference rule and meta information schema are not

stored in a receiving apparatus (transmitting the program guide data with the television

programming after the user preference profile has been uploaded out of the receiver to

the headend; page 16, lines 12-17 and page 30, lines 20-27);

changing the inference rule that is transmitted (wherein the profile, and the

contained rules, are updated with viewing information; page 28, lines 25-31 and page

29, lines 1-9) corresponding to data that has been received from a receiving apparatus

(television viewing information received through an upstream modem; page 28, lines

25-31);

storing a meta information schema that defines the data structure of meta

information that has been received on a receiving side (customization instructions for

EPG layout; page 20, line 19 – page 22, line 17);

storing meta information that has been selected and received (wherein the

customized EPG must be stored before output; page 24, lines 12-18); and

searching and/or browsing the meta information (page 31, lines 11-13);

wherein the meta information schema includes the identifier data (Fig. 9A; page 16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content (actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page 17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data corresponding to each attribute name of the content (program descriptions; page 16, line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data when the inference rule and the meta information schema are stored in the receiving apparatus (transmitting updates to the program guide data with the television programming during the daily or monthly period the preference profile is locally stored before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically disclose *only* transmitting the meta information and content data.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1; column 5, lines 23-50) wherein only program guide text (metadata information; column 19, lines 14-26) and television programming are transmitted (wherein the television programs are transmitted independently of the program guide; column 6, line 62-column 7, line 43) when program guide data is already stored locally (template data required to construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth requirements by limiting the amount of information which needs to be re-transmitted (column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the meta

information and content data, as taught by Hendricks, for the typical benefit of reducing

the system's bandwidth requirements by limiting the amount of information which needs

to be re-transmitted.

As to claim 20, Maissel discloses a transmitting and receiving method for

providing digital content and receiving digital content, comprising the steps of:

transmitting meta information about content data that is transmitted (transmitting

the program guide data with the television programming; page 16, lines 12-17), a meta

information schema that defines the data structure of the meta information (default EPG

data before customization at a user site; page 20, lines 19-31, page 21, lines 1-5 and

page 30, lines 20-27), an inference rule (page 28, lines 1-9 and page 30, lines 20-27),

identifier data associated with a particular portion of the content data that is adapted to

distinguish a segment of content data (program titles identifying program content; Fig.

9A, page 16, line 24-page 17, line 16 and page 31, lines 7-13) and content data through

a transmission path when the inference rule and the meta information schema are not

stored in a receiving apparatus (transmitting the program guide data with the television

programming after the user preference profile has been uploaded out of the receiver to

the headend; page 16, lines 12-17 and page 30, lines 20-27);

storing a meta information schema that defines the data structure of meta

information that has been received on a receiving side (customization instructions for

EPG layout; page 20, line 19 – page 22, line 17);

storing meta information that has been selected and received (wherein the

customized EPG must be stored before output; page 24, lines 12-18); and

changing the structure of the meta information schema and meta information that

has been stored (customizing the EPG structure based upon **current** user profiles and

preferences; page 20, lines 19-page 22, lines 17) corresponding to a user profile (page

19, lines 1-8 and page 20, lines 19-27) and to an inference rule (page 27, lines 28-31

and page 28, lines 1-11);

wherein the meta information schema includes the identifier data (Fig. 9A; page

16, line 24-page 17, line 16 and page 31, lines 7-13) and attribute names of the content

(actor and director names; page 16, line 24-page 17, line 16);

wherein the meta information includes the identifier data (page 16, line 24-page

17, line 16), the attribute names (page 16, line 24-page 17, line 16) and description data

corresponding to each attribute name of the content (program descriptions; page 16,

line 24-page 17, line 16).

While Maissel discloses transmitting the meta information and the content data

when the inference rule and the meta information schema are stored in the receiving

apparatus (transmitting updates to the program guide data with the television

programming during the daily or monthly period the preference profile is locally stored

before upload; page 16, lines 12-17 and page 30, lines 20-27), he fails to specifically

disclose *only* transmitting the meta information and content data.

In an analogous art, Hendricks discloses a television distribution system (Fig. 1;

column 5, lines 23-50) wherein only program guide text (metadata information; column

19, lines 14-26) and television programming are transmitted (wherein the television

programs are transmitted independently of the program guide; column 6, line 62-column

7, line 43) when program guide data is already stored locally (template data required to

construct the guide for display; column 11, lines 1-12, column 13, lines 51-67 and

column 24, lines 7-41) for the typical benefit of reducing the system's bandwidth

requirements by limiting the amount of information which needs to be re-transmitted

(column 13, line 51-column 14, line 6 and column 23, line 60-column 24, line 15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Maissel's system to include *only* transmitting the meta

information and content data, as taught by Hendricks, for the typical benefit of reducing

the system's bandwidth requirements by limiting the amount of information which needs

to be re-transmitted.

As to claims 21 and 22, Maissel and Hendricks disclose converting means for

converting the format of the meta information into a transmission format (wherein the

guide information must be formatted for transmission over the television broadcast

channels; see Maissel at page 16, lines 12-17).

Response to Arguments

4.   Applicant's arguments with respect to claims 1-24 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

5.   The following are suggested formats for either a Certificate of Mailing or
Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with
all correspondence concerning this application or proceeding to establish a date of
mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in
such communication being considered as timely if the established date is within the
required period for reply. The Certificate should be signed by the individual actually
depositing or transmitting the correspondence or by an individual who, upon information
and belief, expects the correspondence to be mailed or transmitted in the normal course
of business by another no later than the date indicated.

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with
sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on _____.
  (Date)

Typed or printed name of person signing this certificate:

_____

Signature: _____

Registration Number: _____

Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and
Trademark Office, Fax No. ( )_____ - _____ on _____.
  (Date)

Typed or printed name of person signing this certificate:

_____

Signature: _____

Registration Number: _____

Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James Sheleheda whose telephone number is (571)

272-7357. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James Sheleheda
Patent Examiner
Art Unit 2623

JS

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